





Practitioner's Docket No. MSU 4.1-458

PATENT



Preliminary Classification:

Proposed Class:

Subclass:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129.' " M.P.E.P. § 601, 7th ed.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box Patent Application Assistant Commissioner for Patents Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Linda S. Mansfield, Mary G. Rossano, Alice J. Murphy and

Ruth A. Vrable

WARNING: 37 C.F.R. § 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(i)

is filed supplying or changing the name or names of the inventor or inventors."

For (title): VACCINE TO CONTROL EQUINE PROTOZOAL MYELOENCEPHALITIS

IN HORSES

CERTIFICATION UNDER 37 C.F.R. § 1.10*

(Express Mail label number is mandatory.) (Express Mail certification is optional.)

I hereby certify that this New Application Transmittal and the documents referred to as attached therein are being deposited with the United States Postal Service on this date Feb. 24, 2000, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number __EE488567620US dressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Peggy L. Casper

print name of person mailing paper)

Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. § 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

"WARNING: Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).

> "Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

> > (New Application Transmittal [4-1]-page 1 of 11)

1. Type of Application

This new application is for a(n)

(check one applicable item below)

(entering the special section)
☑ Original (nonprovisional)
☐ Design
☐ Plant
WARNING: Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. § 371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application.
WARNING: Do not use this transmittal for the filing of a provisional application.
NOTE: If one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION.
☐ Divisional.
☐ Continuation.
☐ Continuation-in-part (C-I-P).
. Benefit of Prior U.S. Application(s) (35 U.S.C. §§ 119(e), 120, or 121)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. § 112. Each prior application must also be:

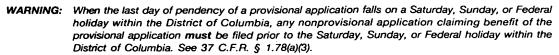
- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or
 - (ii) Complete as set forth in § 1.51(b); or
- (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
- (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(I) within the time period set forth in § 1.53(f).

37 C.F.R. § 1.78(a)(1).

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICA-TION(S) CLAIMED.

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120, 121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

(New Application Transmittal [4-1]—page 2 of 11)



The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

3. Papers Enclosed	rs Enclosed
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Citations

A.			d for filing date under 37 C.F.R. § 1.53(b) (Regular) or 37 C.F.R. § 1.153 Application				
44	_ Pa	ages	of specification				
10	_ Pa	ages	of claims				
_0	_ Sł	neets	s of drawing				
WAR		filings of the Fo	NOT submit original drawings. A high quality copy of the drawings should be supplied when any a patent application. The drawings that are submitted to the Office must be on strong, white, tooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the awings are necessary, they should be made to the original drawing and a high-quality copy of a corrected original drawing then submitted to the Office. Only one copy is required or desired. If comments on proposed then-new 37 C.F.R. § 1.84, see Notice of March 9, 1988 (1990 O.G. 1962).				
NOTE	in: the on	vento e Offi o the	ying indicia, if provided, should include the application number or the title of the invention, r's name, docket number (if any), and the name and telephone number of a person to call if see is unable to match the drawings to the proper application. This information should be placed back of each sheet of drawing a minimum distance of 1.5 cm. (5/8 inch) down from the top page" 37 C.F.R. § 1.84(c)).				
			(complete the following, if applicable)				
		"PE	enclosed drawing(s) are photograph(s), and there is also attached a TITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R84(b).				
		form	nal				
		info	rmal				
B.	Oth	er P	apers Enclosed				
8	_ Pa	ages	of declaration and power of attorney				
_1	_ Pa	ages	of abstract				
	_ 01	ther					
A	dditi	onal	papers enclosed				
		Am	endment to claims				
			Cancel in this applications claims before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)				
			Add the claims shown on the attached amendment. (Claims added have been numbered consecutively following the highest numbered original claims.)				
		Pre	liminary Amendment				
	X	Info	rmation Disclosure Statement (37 C.F.R. § 1.98)				
	X	Form PTO-1449 (PTO/SB/08A and 08B)					

	☐ Declaration of Biological Deposit	
		bmission of "Sequence Listing," computer readable copy and/or amendment rtaining thereto for biotechnology invention containing nucleotide and/or nino acid sequence.
] Au tiv	thorization of Attorney(s) to Accept and Follow Instructions from Representa-
] Sp	ecial Comments
	Ot	her
		on or oath (including power of attorney)
·.	the pi by all application the sign by a sign being declar perso execu-	If y executed declaration is not required in a continuation or divisional application provided that for nonprovisional application contained a declaration as required, the application being filed is or fewer than all the inventors named in the prior application, there is no new matter in the ation being filed, and a copy of the executed declaration filed in the prior application (showing gnature or an indication thereon that it was signed) is submitted. The copy must be accompanied statement requesting deletion of the names of person(s) who are not inventors of the application filed. If the declaration in the prior application was filed under § 1.47, then a copy of that ration must be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning in under § 1.47 has subsequently joined in a prior application, then a copy of the subsequently ited declaration must be filed. See 37 C.F.R. §§ 1.63(d)(1)–(3).
NOTE:	is dire abbre count C.F.F	daration filed to complete an application must be executed, identify the specification to which it cted, identify each inventor by full name including family name and at least one given name, without viation together with any other given name or initial, and the residence, post office address and ry or citizenship of each inventor, and state whether the inventor is a sole or joint inventor. 37. § 1.63(a)(1)–(4).
NOTE:	as pro as pro is tha this p	inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration escribed by § 1.62, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration escribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship tinventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under aragraph accompanied by the fee set forth in § 1.17(f) is filed supplying or changing the name mes of the inventor or inventors." 37 C.F.R. § 1.41(a)(1).
×] E	nclosed
	E	recuted by
		(check all applicable boxes)
	X	inventor(s).
		legal representative of inventor(s). 37 C.F.R. §§ 1.42 or 1.43.
		joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.
		☐ This is the petition required by 37 C.F.R. § 1.47 and the statement required by 37 C.F.R. § 1.47 is also attached. See item 13 below for fee.
		ot Enclosed.
NOTE:	the U	e the filing is a completion in the U.S. of an International Application or where the completion of I.S. application contains subject matter in addition to the International Application, the application be treated as a continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.
		Application is made by a person authorized under 37 C.F.R. § 1.41(c) on behalf of all the above named inventor(s).
		(New Application Transmittal [4-1]—page 4 of 11)

(The de	eclar	ation or	oath, along with the su can be filed su	_		37 C.F.R. § 1.1	16(e)	
			Showing that the filin (not required unless of			7 C.F.R. § 1.4	1(d))	
6. Invent	torsh	nip State	ement					
WARNING	ON		inventors are each not the f f the various claims at the					
The inve	entor	ship for	all the claims in this a	pplication a	are:			
X	The	same.						
			O	r				
			ne. An explanation, inclease last claimed invention	-	•	f the various c	laims at	[
		is subm	nitted.					
		will be	submitted.					
7. Langu	ıage							
Aı re	n Eng quired	lish transla d by 37 C.I	cluding a signed oath or dec ation of the non-English lan F.R. § 1.17(k) is required to l ce. 37 C.F.R. § 1.52(d).	guage applic	ation and the	processing fee of	f \$130.00)
	Eng	lish						
	Nor	n-English						
			ached translation includ	des a state	ment that th	ne translation i	s accu-	-
8. Assigı	nme	nt		Board	of Trus	stees ope	ratin	g
X	An 30	assignm	ent of the invention to inistration Blo	Michig	gan Stai	te Univer	sity	- 48824
								-
	X	MENT)	hed. A separate "CACCOMPANYING NEVALSO attached.					
		will follo	ow.					
			is submitted with a new appl ssignment." Notice of May 4			tters-one for the a	pplication	7
WARNING			euted "CERTIFICATE UNDER cation is filed by an assignee				itinuation-	-
•				(New Ap	plication Trans	smittal [4-1]—pag	e 5 of 11)

 Certified Copy Certified copy(ies) of application 	ation(s)		
Country	Appln. No.		Filed
Country	Appin. No.		Filed
Country	Appin. No.		Filed
from which priority is claimed	d		
is (are) attached.			
□ will follow.			
NOTE: The foreign application for declaration. 37 C.F.R. §	orming the basis for the cla	im for priority must b	be referred to in the oath or
& 120 is itself entitled to I	priority from a prior foreign of CATION TRANSMITTAL W.	application, then com	aims benefit under 35 U.S.C plete item 18 on the ADDEL PRIOR U.S. APPLICATION(S
7. M Hogula applicant			
	CLAIMS AS FI	LED	
Number filed	Number Extra	Rate	Basic Fee 37 C.F.R. § 1.16(a) \$690.00
Total Claims (37 C.F.R. § 1.16(c)) 50 -	- 20 = -30-	× \$ 18.00	\$540.00
Independent			
Claims (37 C.F.R. § 1.16(b))	- 3 = ⁻¹⁴⁻	× \$ 78.00	\$1,092
Multiple dependent claim(s), if any (37 C.F.R. § 1.16(d))	1	+ \$260.00	\$260.00
☐ Amendment cano	celling extra claims is	enclosed.	
	ting multiple-depende		d.
	ms is not being paid		
NOTE: If the fees for extra claims prior to the expiration of	are not paid on filing they n the time period set for res	nust be paid or the cla	ims cancelled by amendment and Trademark Office in ar
notice of fee deficiency.	Filing Fee Calculation	nn	\$ 2,582.00
B. Design application (\$310.00—37 C.F.	n		V

Filing Fee Calculation

(New Application Transmittal [4-1]—page 6 of 11)

C.		Plant application (\$480.00—37 C.F.	P & 1 16(a))			
		(ψ+00.00 07 0.1	Filing fee calculation	n	\$	
11.	Small	Entity Statemen		•	V	
• • •		-		nall entity under 37	C.F.R. § 1.9 and 1.27	
		is (are) attached.	and is a ning by a sir	ian criticy arider or		
WA	WARNING: "Status as a small entity must be specifically established in each application or patent in which the status is available and desired. Status as a small entity in one application or patent does not affect any other application or patent, including applications or patents which are directly or indirectly dependent upon the application or patent in which the status has been established. The refiling of an application under § 1.53 as a continuation, division, or continuation-in-part (including a continued prosecution application under § 1.53(d)), or the filing of a reissue application requires a new determination as to continued entitlement to small entity status for the continuing or reissue application. A nonprovisional application claiming benefit under 35 U.S.C. § 119(e), 120, 121, or 365(c) of a prior application, or a reissue application may rely on a statement filed in the prior application or in the patent or includes a reference to the statement in the prior application or in the patent or includes a copy of the statement in the prior application or in the patent or includes a copy of the statement in the prior application or in the patent and status as a small entity is still proper and desired. The payment of the small entity basic statutory filing fee will be treated as such a reference for purposes of this section." 37 C.F.R. § 1.28(a)(2).					
WA	RNING:	•	make the required self-cert	•	s signing the statement 509.03, 6th ed., rev. 2, July	
		(00	mplete the following	, if applicable)		
		Status as a small	entity was claimed i	in prior application		
					, from which benefit	
			for this application u	nder:		
		35 U.S.C. § □	119(e), 120,			
			121,			
			365(c),			
		and which statu	s as a small entity is	still proper and o	lesired.	
		☐ A copy of the	ne statement in the p	prior application is	included.	
		Filing Fee Ca	Iculation (50% of A,	B or C above)		
			\$ 1,291.00	· · · -		
NO	are		s of the date of timely pa	-	blished and a refund request ne two-month period is not	
12.	Requ	est for Internatio	nal-Type Search (37	7 C.F.R. § 1.104(d))	
			(complete, if app	olicable)		
		• •	international-type se amination on the me		application at the time	

(New Application Transmittal [4-1]—page 7 of 11)

13. Fe	e Payr	nent Being Made at This Time	
. [Enclosed	
		No filing fee is to be paid at this time. (This and the surcharge required by 37 C.F.R. § subsequently.)	1.16(e) can be paid
[2	ß Enc	losed .	
	X	Filing fee	$\frac{1,291.00}{}$
٠,	(X)	Recording assignment (\$40.00; 37 C.F.R. § 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION".)	\$40.00
		Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached (\$130.00; 37 C.F.R. §§ 1.47 and 1.17(i))	\$
		For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. §§ 1.52(d) and 1.17(k))	\$
		Processing and retention fee (\$130.00; 37 C.F.R. §§ 1.53(d) and 1.21(l))	\$
		Fee for international-type search report (\$40.00; 37 C.F.R. § 1.21(e))	\$
NOTE:	failing t 37 C.F. either ti	R. § 1.21(I) establishes a fee for processing and retaining any appli o complete the application pursuant to 37 C.F.R. § 1.53(f) and thi R. §§ 1.53 and 1.78(a)(1), indicate that in order to obtain the benef he basic filing fee must be paid, or the processing and retention for I year from notification under § 53(f).	s, as well as the changes to it of a prior U.S. application, se of § 1.21(I) must be paid,
		Total fees enclosed	\$ <u>1,331.00</u>
14. M		of Payment of Fees	
(2	ĭ Che	eck in the amount of \$ 1,331.00	
] Cha	arge Account No.	in the amount of
	-	uplicate of this transmittal is attached.	
NOTE:	Fees sh § 1.22(ould be itemized in such a manner that it is clear for which purpose b).	the fees are paid. 37 C.F.R.

(New Application Transmittal [4-1]—page 8 of 11)

15. Authorization to Charge Additional Fees

WARNING: If no fees are to be paid on filing, the following items should not be completed.

WARNING: Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.

- The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 13-0610 :
 - 37 C.F.R. § 1.16(a), (f) or (g) (filing fees)
 - 37 C.F.R. § 1.16(b), (c) and (d) (presentation of extra claims)
- NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. § 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.
 - 37 C.F.R. § 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
 - 37 C.F.R. § 1.17(a)(1)–(5) (extension fees pursuant to § 1.136(a)).
 - 37 C.F.R. § 1.17 (application processing fees)
- NOTE: ". . . A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).
 - 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b))
- NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. § 1.311(b).
- NOTE: 37 C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . . the issue fee. . . " From the wording of 37 C.F.R. § 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

(New Application Transmittal [4-1]—page 9 of 11)

16. Instructions as to Overpayment

NOTE: ". . . Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).

☑ Credit Account No. 13-0610

☐ Refund

Reg. No. 20,931

Tel. No. (517) 347-4100

Customer No. 21036

SIGNATURE OF PRACTITIONER

Ian C. McLeod

(type or print name of attorney)

2190 Commons Parkway

P.O. Address

Okemos, Michigan 48864

(New Application Transmittal [4-1]—page 10 of 11)

 	polation by location of added pages
pi st th	theck the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. page as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF RIOR U.S. APPLICATION(S) CLAIMED)
K	Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S Application(s) Claimed
	Number of pages added5
	Plus Added Pages for Papers Referred to in Item 4 Above
	Number of pages added
Ċ	Plus added pages deleting names of inventor(s) named in prior application(s who is/are no longer inventor(s) of the subject matter claimed in this application
	Number of pages added
	Plus "Assignment Cover Letter Accompanying New Application"
	Number of pages added
State	ment Where No Further Pages Added
	f no further pages form a part of this Transmittal, then end this Transmittal with his page and check the following item)
	This transmittal ends with this page.

(New Application Transmittal [4-1]—page 11 of 11)

ADDED PAGES FOR APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED

NOTE: See 37 C.F.R. § 1.78.

17. Relate Back

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120, 121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

(complete the following, if applicable)

Amend the specification by inserting, before the first line, the following sentence:

A. 35 U.S.C. § 119(e)

NOTE: "Any nonprovisional application claiming the benefit of one or more prior filed copending provisional applications must contain or be amended to contain in the first sentence of the specification following the title a reference to each such prior provisional application, identifying it as a provisional application, and including the provisional application number (consisting of series code and serial number)." 37 C.F.R. § 1.78(a)(4).

This application claims the benefit of U.S. Provisional Application(s) No(s).:

APPLICATION NO(S).:	FILING DATE		
60 / 152,193	9/2/99		
/			
/			

(Added Pages for Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed
[4-1.1]—page 1 of 5)

B. 35 L	J.S.C. §§ 120, 121 and 36	5(c)	
	claiming the benefit of one or mo applications designating the Unite first sentence of the specification for it by application number (consistin number and international filing designations)	ore prior filed copending nonpro ad States of America must cont collowing the title a reference to e ing of the series code and serial ate and indicating the relations	53(d), any nonprovisional application ovisional applications or international ain or be amended to contain in the ach such prior application, identifying I number) or international applicationship of the applications Crosspropriate." (See § 1.14(a)). 37 C.F.F.
] "This application is a		
	□ continuation		
	☐ continuation-in-part		
	☐ divisional		
. 0	f copending application(s)		
	application number 0 /		filed on
	International Application	Control of the Contro	filed on
		and which designat	ed the U.S."
NOTE:	The proper reference to a prior fill serial number and the filing date		d the U.S. national phase is the U.S signated the U.S.
NOTE:	· · · · · · · · · · · · · · · · · · ·		to the International Application, the do so for other reasons then the filin
NOTE:	The deadline for entering the nati in the Notice of April 28, 1987 (1	·	nternational application was clarifie
	month from the priority date if the Preliminary Examination has been and until the 32nd month from the which elected the United States from the priority date, provided to the Patent and Trademark Offinternational application has not 20 or 30 month period respectivel States 20 or 30 months from the priority date if the priority date is a second to the priority date.	United States has been designated prior to the expiration of the priority date if a Demand for of America has been filed priorithat a copy of the international dice within the 20 or 30 month been communicated to the Pately, the international application be priority date respectively. These pragraph (i) of § 1.495. A continuity	olication to be pending until the 22nd ated and no Demand for International the 19th month from the priority data International Preliminary Examination to the expiration of the 19th month application has been communicated period respectively. If a copy of the lent and Trademark Office within the periods have been placed in the rule ing application under 35 U.S.C. 365(contional application."
	The nonprovisional app	lication designated above	e, namely application
			, claims the benefit o
	U.S. Provisional Applicat	tion(s) No(s).:	
APPLIC	ATION NO(S).:		FILING DATE

☐ Where more than one reference is made above, please combine all references

into one sentence.

18. Relate Back—35 U.S.C. § 119 Priority Claim for Prior Application

The prior U.S. application(s), including any prior International Application designating the U.S., identified above in item 17B, in turn itself claim(s) foreign priority(ies) as follows:

	Country	Appln. no.	Filed on		
The cer	tified copy(ies) has (have)				
		, in prior application 0	/, which was		
	is (are) attached.				
WARNING: The certified copy of the priority application that may have been communicated to the PTO by the International Bureau may not be relied on without any need to file a certified copy of the priority application in the continuing application. This is so because the certified copy of the priority application communicated by the International Bureau is placed in a folder and is not assigned a U.S. serial number unless the national stage is entered. Such folders are disposed of if the national stage is not entered. Therefore, such certified copies may not be available if needed later in the prosecution of a continuing application. An alternative would be to physically remove the priority documents from the folders and transfer them to the continuing application. The resources required to request transfer, retrieve the folders, make suitable record notations, transfer the certified copies, enter and make a record of such copies in the Continuing Application are substantial. Accordingly, the priority documents in folders of international applications that have not entered the national stage may not be relied on. Notice of April 28, 1987 (1079 O.G. 32 to 46).					
19. Mai	intenance of Copender	ncy of Prior Applica	ation		
re			for application extending the term for e continuation application. Notice of		
A. 🗆	Extension of time in prior	application			
(This	s item must be completed if the period set	and the papers filed in the prior application			
	A petition, fee and respor	nse extends the term in	the pending prior application		
	☐ A copy of the petitio	n filed in prior applicat	ion is attached.		
B. 🗆	Conditional Petition for E	xtension of Time in Pri	or Application		
	(complete this ite	m, if previous item not	applicable)		
	A conditional petition for application.	extension of time is be	eing filed in the pending prior		
	☐ A copy of the conditi	ional petition filed in the	e prior application is attached.		
			•		

(Added Pages for Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed

[4-1.1]—page 3 of 5)

20. Further Inventorship Statement Where Benefit of Prior Application(s) Claimed

		(complete applicable item (a), (b) and/or (c) below)				
(a)	This application discloses and claims only subject matter disclose application whose particulars are set out above and the inven application are					
		the same.				
		less than those named in the prior application. It is requested that the following inventor(s) identified for the prior application be deleted:				
		(type name(s) of inventor(s) to be deleted)				
(b)	This application discloses and claims additional disclosure by amendment a new declaration or oath is being filed. With respect to the prior applicat the inventor(s) in this application are					
		the same.				
		the following additional inventor(s) have been added:				
		(type name(s) of inventor(s) to be added)				
(c)	The	inventorship for all the claims in this application are				
	X	the same.				
		not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made				
		is submitted.				
		will be submitted.				

21. Abandonment of Prior Application (if applicable)
Please abandon the prior application at a time while the prior application is pending, or when the petition for extension of time or to revive in that application is granted, and when this application is granted a filing date, so as to make this application copending with said prior application.
NOTE: According to the Notice of May 13, 1983 (103, TMOG 6-7), the filing of a continuation or continuation-in- part application is a proper response with respect to a petition for extension of time or a petition to revive and should include the express abandonment of the prior application conditioned upon the granting of the petition and the granting of a filing date to the continuing application.
22. Petition for Suspension of Prosecution for the Time Necessary to File an Amendment
WARNING: "The claims of a new application may be finally rejected in the first Office action in those situations where (A) the new application is a continuing application of, or a substitute for, an earlier application, and (B) all the claims of the new application (1) are drawn to the same invention claimed in the earlier application, and (2) would have been properly finally rejected on the grounds of art of record in the next Office action if they had been entered in the earlier application." M.P.E.P., § 706.07(b), 7th ed.
NOTE: Where it is possible that the claims on file will give rise to a first action final for this continuation application and for some reason an amendment cannot be filed promptly (e.g., experimental data is being gathered) it may be desirable to file a petition for suspension of prosecution for the time necessary.
(check the next item, if applicable)
☐ There is provided herewith a Petition To Suspend Prosecution for the Time Necessary to File An Amendment (New Application Filed Concurrently)
23. Small Entity (37 C.F.R. § 1.28(a))
Applicant has established small entity status by the filing of a statement in parent application / on
☐ A copy of the statement previously filed is included. WARNING: See 37 C.F.R. § 1.28(a).
WARNING: "Small entity status must not be established when the person or persons signing the statement can unequivocally make the required self-certification." M.P.E.P., § 509.03, 7th ed. (emphasis added).
24. NOTIFICATION IN PARENT APPLICATION OF THIS FILING
 A notification of the filing of this (check one of the following)
□ continuation
☐ continuation-in-part
☐ divisional
is being filed in the parent application, from which this application claims priority under 35 U.S.C. § 120.

(Added Pages for Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed [4-1.1]—page 5 of 5)

Practitioner's Docket No. MSU 4.1-458								PATENT			
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				Ruth	A. V						
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		Nonpro of Am		ientific	or Edu	cational U	nder Statute	e of State of	the United	States	;
		(Name	of Sta	ate)	1
		(Citatio	on of S	Statute	e))
		Would Qualify as Tax Exempt Under Internal Revenue Service Code (26 USC 501(a) and 501(c)(3)), if Located in the United States of America							;		
Would Qualify as Nonprofit Scientific or Educational Under Statute of State of the United States of America if Located in the United States of America							f				
		(Name	of St	ate))
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organ State	nizations es Pai	on, as d tent and	lefined d Trade	in 37 emark	CFR 1.9 Office u	(e), for pur	poses of pay ons 41(a) a	above qualifi ying reduced nd (b) of Title	fees to the I	J nited	t
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		the pa	atent ic	dentifi	ed above	∍.					

(Small Entity-Non-Profit [7-3]-page 1 of 3)

I hereby state that rights under contract or law have been conveyed to, and remain with, the nonprofit organization, with regard to the above identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 C.F.R. 1.9(c), if that person made the invention, or by any concern that would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e)

*NOTE: Separate statements are required from each named person, concern or organization having rights to the invention as to their status as small entities. (37 CFR 1.27).

Each such person, concern or organization having any rights in the invention is listed below:

X C	☒ No such person, concern, or organization exists.☐ Each such person, concern or organization is listed below.										
	Name										
□ IN	DIVIDUAL		SMALL BUSINESS CONCERN		NONPROFIT ORGANIZATION						
☐ IN	DIVIDUAL		SMALL BUSINESS CONCERN		NONPROFIT ORGANIZATION						

I acknowledge the duty to file, in this application or patent, notification of any charge in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

(check the following item, if desired)

- NOTE: The following verification statement need not be made in accordance with the rules published on Oct. 10, 1997, 62 Fed. Reg. 52,131, effective Dec. 1, 1997.
- NOTE: "The presentation to the Office (whether by signing, filing, submitting, or later advocating) of any paper by a party, whether a practitioner or non-practitioner, constitutes a certification under § 10.18(b) of this chapter. Violations of § 10.18(b)(2) of this chapter by a party, whether a practitioner or non-practitioner, may result in the imposition of sanctions under § 10.18(c) of this chapter. Any practitioner violating § 10.18(b) may also be subject to disciplinary action. See §§ 10.18(d) and 10.23(c)(15)." 37 C.F.R. § 1.4(d)(2).
- I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Name of Person Signing	Daniel T. Evon, Dir Michigan State Univ	<u>A</u> dministration		
Title in Organization Address of Person Signing _	301 Administration	-		
	East Lansing, MI	48824-1046		
SIGNATURE Jam	DSm 1	Date 2	11100	· —

(Small Entity-Non-Profit [7-3]-page 3 of 3)